



Science Voices
Annual Report
2025



To Our Valued Partners and Supporters,

In 2025, Science Voices notched a number of significant successes. The challenges of 2024 led us to reduce the scope of our work for 2025, resulting in a stronger focus on our existing portfolio of projects. This resulted in some big successes in the Greenworks program and advancing work in Agavi and Sustainable States, which will continue through 2026. You can find details in each program's dedicated sections, but here are a few of the major highlights of the year:

- Site visits to Indonesia (August), Ukraine (September), and Brazil (November)
- In-person professional development workshops for 40 teachers at Khairun University in Ternate, Indonesia, and 10 teachers at Lviv Polytechnic and Lviv National University in Lviv, Ukraine
- Multiple stingless native bee hives delivered to Guapiruvu and Tekoa Nhanderu Porã Indigenous Community in Vale do Ribeira, Brazil, with associated learning and professional development opportunities for villagers (Beeworks Brazil)
- Launch of Beeworks Indonesia on Halmahera Island (near Ternate) with women's groups to replicate the Beeworks Brazil model
- Project Design curriculum utilized with 10 students at Lviv Polytechnic in Ukraine to demo the curriculum in Ukrainian
- Full English, Indonesian, Portuguese, Spanish, and Ukrainian translations of the Project Design Curriculum (and associated teacher professional development materials)
- Multiple visits of the Clean Rivers Ukraine team to the Sukel' River region in the Carpathian Mountains to identify illegal dumps, test water quality of the river, and identify potential geoheritage sites for geotourism development
- Signed 5-year MOUs with Lviv Polytechnic University, the Geography and Geology Departments of Ivan Franko National University of Lviv, and Precarpathian Professional College of Forestry and Tourism in Ukraine

Although Greenworks saw some great successes, Agavi and Sustainable States had slower progress this year. Although Agavi advanced early in the year with the creation of a student internship team to speed up development, the team became incommunicative after a few months and was dismissed. We have set up a smaller team that will be working with AI tools to complete the prototype and begin testing in Brazil in 2026. Sustainable States continued to progress as well, but slowly because the focus this year remained on Greenworks and Agavi.

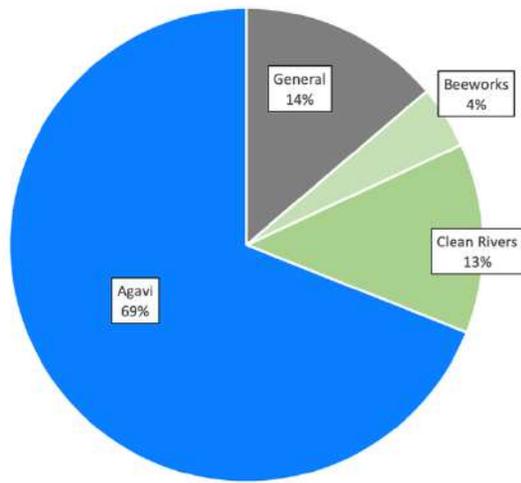
2026 will see a shift in focus to the development of Agavi to finally get it out of design iterations and into classrooms for testing. Additionally, we will be developing our funding sources, as we have a number of successful and growing programs (Beeworks, Clean Rivers, and others that will be detailed later) that we need to support. As always, thank you for your generous contributions to our work and we look forward to an incredible 2026!



Lev Horodyskyj
Founder, Science Voices

Funds Raised by Category (2025)

100% from donations and donation matching

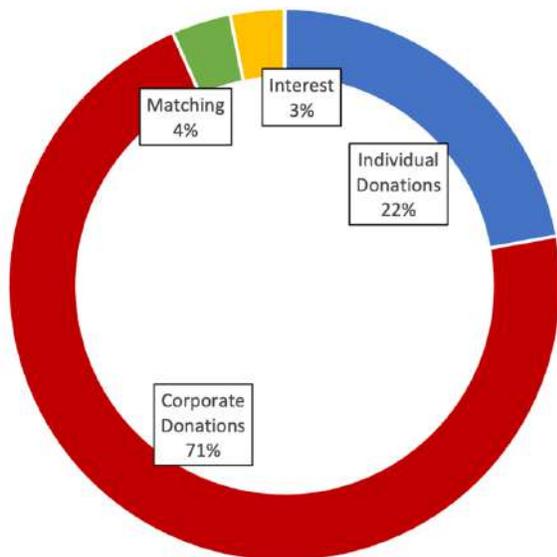


General = funds for operations, company travel, and prototyping

Beeworks, Clean Rivers = funds for Greenworks spin-off projects (Beeworks and Clean Rivers, no funds raised for the Greenworks general fund in 2025)

Agavi = funds for Agavi platform development

Sustainable States = funds for development of software and hardware for Sustainable States program (no funds raised in 2025)



Volunteers and Researchers

Greenworks (3 volunteers, 2 researchers)



Agavi (5 volunteers)



Sustainable States

(1 volunteer)



University Partnerships



Khairun University
(Indonesia)



Lviv Polytechnic
(Ukraine)



Geography Lviv National
(Ukraine)



Geology Lviv National
(Ukraine)



Precarpathian College
(Ukraine)

Educational Impacts



Indonesia
+40 Teachers
(Project-Based Learning)



Ukraine
+10 Teachers, +10 Students
(Project-Based Learning)



Greenworks

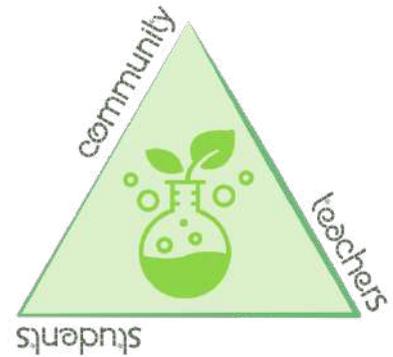
Greenworks is a global environmental stewardship network linking teachers, students, and communities together via project-based learning.

Overall Program Outlook

In 2025, we implemented a new vision for Greenworks that sought to integrate various related projects into one interconnected program. Towards that end, we have been successful.

Student-Teacher Axis

- Project Design Curriculum in English, Indonesian, Portuguese, Spanish, and Ukrainian
- In-person teacher professional development workshops in project-based learning in Indonesia and Ukraine
- 2-level teacher certificate program for training in and implementing project-based learning in classrooms
- 3-level student certificate program for designing and implementing research and community projects



Teacher-Community Axis

- Financial support for three extension projects (Beeworks Brazil, Beeworks Indonesia, Clean Rivers Ukraine)
- Field demonstrations of extension work and building community connections (Ukraine)
- Growing connections between Greenworks extension projects (Brazil-Indonesia)

Community-Student Axis

- Demo "Greenworks in Greenfield" program in July as virtual demo of future exchange program



Fieldwork – Beeworks Brazil

This year, we spent a lot of time in the field to support our Greenworks partners. As we are currently based in Brazil, this allowed for frequent on-the-ground work with Dr. Roberto Greco at Universidade Estadual de Campinas (UNICAMP) and visits to partner community Guapiruvu in Vale do Ribeira to observe the development of the Beeworks Brazil project. The Beeworks team

purchased and delivered multiple native bee hives to Guapiruvu and organized the community visits of Gabriela Silva, a native bee expert, to help support villagers in their learning. In November, the project expanded to the Tekoa Nhanduru Porã Indigenous Community, also in Vale do Ribeira. Students from UNICAMP accompanied Dr. Greco on multiple visits to these communities to observe extension projects (Beeworks among them) and discussed life and economic challenges with the villagers during these visits.

In 2026, Beeworks Brazil will expand to more communities in the Vale do Ribeira region. We are also working on finalizing an MOU with UNICAMP for continued expansion of Brazilian projects and partners.



Fieldwork – Khairun University Workshop and Beeworks Indonesia

In August, we visited our partners at Khairun University in Ternate, Indonesia. During the first week, we conducted a teacher professional development workshop with about 40 teachers at Khairun University. During this workshop, we focused on the principles of active learning and the features of the Project Design Curriculum, followed by guest talks by Greenworks partners in the US, Brazil, and Ukraine. The teachers received Level 1 certificates, indicating that they have completed the workshop and its associated activities. Level 2 certificates can be achieved later if teachers demonstrate successful implementation and impact of project-based learning in their classrooms.

We also visited Runy's School (a grade school) and SMA Negara 1 Kota Ternate (a high school) where we talked about scientific thinking and stingless bees.

On the nearby island of Halmahera, we visited another campus of Khairun University where we officially inaugurated the Beeworks Indonesia project. Much like Beeworks Brazil, hives of stingless bees have been left with local community members and will be accompanied by training from experts.

In 2026, we will be working to expand the connections between Beeworks Brazil and Beeworks Indonesia so that we can build South-South connections of experts and expertise.



Fieldwork – Lviv Polytechnic Workshop and Clean Rivers Ukraine

Following our work in Indonesia, we spent a couple of weeks in Ukraine working with our partners there as well. We conducted a weeklong workshop on active learning and the features of the Project Design Curriculum, working with 10 teachers from Lviv Polytechnic University and Ivan Franko National University of Lviv. We successfully completed the workshop

and provided Level 1 certificates to 10 teachers, even though the workshop was interrupted a few times by air raid sirens and drone attacks. In the second week, we visited potential geotourism field sites in Kamianets-Podilskyi, east of the Carpathian Mountains in a region known as Podilia, as well as geotourism labs and cultural centers working on geotourism projects in the area. We also visited the current Clean Rivers field site in the Carpathian Mountains, the Sukeľ River, and chatted with local teachers and community members. The highlight of the visit was a morning spent talking with the elders of Bukovets' village after church on Sunday about the history of the village, the grandchildren they've lost to the ongoing war, and their familiarity with the geology work in the area. The goal of the activity was to demonstrate how to set up deeper connections with communities for more enriching extension projects. During our time in Ukraine, we signed 5-year memoranda of understanding with Lviv Polytechnic University, the Geography and Geology Departments of Ivan Franko National University of Lviv, and the Precarpathian Professional College of Forestry and Tourism.

In 2026, the Ukrainian team will be replicating the Professional Development Workshop for teachers at Precarpathian Professional College of Forestry and Tourism (Bolekhiv) and Kamianets-Podilskyi Ivan Ohienko National University (Kamianets-Podilskyi). They will also be offering the Project Design Curriculum to more students at multiple universities and partner schools as well as taking them to field sites for deep discussions with community members in the Carpathian Mountains and Podilia Region. Because of the expansion of the scope of work, Clean Rivers will be rebranded as Geoworks in 2026.

Additional Activities

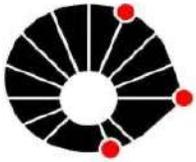
As part of the community-student axis of the Greenworks triangle, we started to build out the foundation for a future exchange program between the US and Brazil. Our volunteers David, Daniel, and Isael ran a small program for Hartnell College students in California called *Greenworks in Greenfield* (GiG) which we coordinated with a similar project design and prototyping program in Brazil. The students really enjoyed the cross-cultural collaboration and designing a project that could help their communities over the course of July.

As usual, we also hosted two students, Sarah (USA) and Enrico (Brazil), through the Blue Marble Space Institute of Science Young Scientist Program this year. Both worked on supporting the Beeworks project and continued on as Science Voices volunteers. Their work involved prototyping an *Adopt-a-Bee* educational app and bee counting sensors that we'll be using to support the growth of Beeworks.



In 2026, we plan on developing GiG into a larger low-cost tech incubator that can support our various Greenworks projects. This will include platforms for hosting low-cost tech designs, mutual connections between Greenworks partners working on low-cost tech solutions, and expanding platforms that our teams use to include drones, stratolites and cubesats. Additionally, we will launch the Adopt-a-Bee app to help support our Beeworks projects as well as local meliponiculturists, researchers, and artists in Brazil.

Partner Locations



UNICAMP
University of Campinas
(Brazil)



Khairun University
(Indonesia)



Lviv Polytechnic
(Ukraine)



Lviv National University
(Ukraine)



Precarpathian College
(Ukraine)

Team Members



Lev Horodyskyj
Co-Lead (Science)
(Brazil/USA)



Tara Lennon
Co-Lead (Policy)
(USA)



David Orta
GiG Development
(USA)



Daniel Orta
GiG Development
(USA)



Isael Estrada
GiG Development
(USA)



Enrico Aranha
Adopt-a-Bee Dev
(Brazil)



Sarah Marks
Adopt-a-Bee Dev
(Brazil)

In-Country Partners



Roberto Greco
(Brazil)



Halikuddin Umasangaji
(Indonesia)



Lily Ishak
(Indonesia)



Ihor Bubniak
(Ukraine)



Andriy Bubniak
(Ukraine)

Looking Forward

- Expansion of Beeworks Brazil to include more communities, low-cost tech projects by UNICAMP students, and educational materials developed in and deployed via Agavi
- Development of Beeworks Indonesia with coordination for Brazil-Indonesia exchange of experts
- Site visit to Guapiruvu with Science Voices volunteers in March or April
- Launch of Adopt-a-Bee app to support bee education and bee observation citizen science projects
- Expansion of Geoworks Ukraine (formally Clean Rivers) to include more communities, teachers, students, and universities via the Project Design Curriculum and Teacher Professional Development Workshops
- Additional Greenworks onboarding with Brazilian university professors in the Northeast and North regions
- Development of GiG network for low-cost tech prototyping across all Greenworks partner communities
- Exploration of new drone and cubesat projects to support Greenworks projects



Agavi

Agavi is an adaptive learning platform designed for smartphones that enables teachers to build innovative new experiences for their students in resource-poor areas.

Progress Report

Following our struggles with an all-volunteer approach towards building a major piece of software over the past few years, we pivoted to a funded student internship approach for this year. During the first half of the year, we established an interview protocol for identifying students who had skills and interests that matched our needs and settled on a team of five. Despite making some initial progress in the middle part of the year, the team became incommunicative in the second half of the year and was dismissed. It was an unfortunate setback.

Nevertheless, the user interface (UI) and user experience (UX) designers worked out well and finished designing the majority of the teacher interface for the beta version of Agavi. Additionally, we began exploring AI solutions to help accelerate the coding for the core of the application. With a smaller team and an AI development and validation pipeline established at the end of the year, we anticipate deploying the first versions of Agavi with teachers by the second half of the year and begin looking at integrating with the SolarSPELL project (a solar-powered digital library project developed by Dr. Laura Hosman at Arizona State University) shortly afterwards.

Team Members



Lev Horodyskyj
Co-Lead
(Brazil/USA)



Alexandru Gazdac
Co-Lead
(Romania)



Giane Galhard
Project Manager
(Canada/Brazil)



João Fontanezi
Programming
(Brazil)



Diane Píntea
UI/UX and Graphics
(Romania)



Lara Soares
UI/UX and Graphics
(Germany/Brazil)

Looking Forward

- Development and testing of Agavi prototype by April
- Site visit to Guapiruvu with Science Voices volunteers in March or April for early user testing and focus group discussions
- Agavi beta version by August for demos and discussion at multiple international conferences
- Exploration of Agavi integration with SolarSPELL project
- Site visit to the Parintins region in Amazonas state, Brazil, with Science Voices volunteers in November or December for user testing and focus group work with teachers in Amazon River Schools



Sustainable States

Sustainable States is a role-playing game that engages teachers and students in game-based learning through environmental diplomacy.

Progress Report

Sustainable States has continued at a slow and steady pace. In the second half of 2025, we ran a simplified version of the *Sustainable States* role-playing game with a small group of students at Universidade Estadual de Campinas (UNICAMP), but the version was not successful. Despite the simplifications, the class size was too small to support the role-playing game, which was designed to be deployed to larger groups of students.

Additionally, Miguel continued to develop the core app to help run the logistics of the complex game. We sought to develop a more ambitious version of the app, but combined with the overwhelming complexity of the app design and lack of success with more simplified game mechanics, we went back to the drawing board. The current design, to be finished by the end of next year, will focus on streamlining choke points in the existing game while providing teachers with maximum flexibility in designing their own stories.

Team Members



Lev Horodyskyj
Co-Lead (Science)
(Brazil/USA)



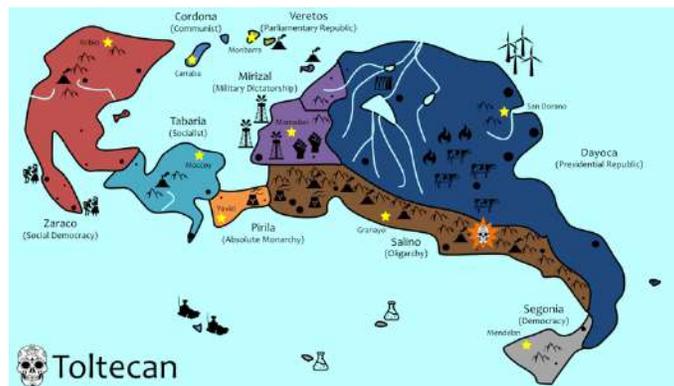
Tara Lennon
Co-Lead (Policy)
(USA)



Miguel Puga
Programming
(Brazil)

Looking Forward

- Completion of the beta version of the *Sustainable States* app to support deployments of the game
- Testing of the app in existing public policy courses run by Dr. Tara Lennon at Arizona State University





Beeworks Indonesia launch on Halmahera Island, close to Ternate, Indonesia (August 2025)



Visits to Runy's School and SMA Negeri 1 Kota Ternate High School in Ternate, Indonesia (August 2025)



Teacher Professional Development Workshop at Lviv Polytechnic in our usual classroom and the emergency basement lab during an air raid siren in Lviv, Ukraine (September 2025)



Visiting the geotoursim lab and associated geotourism locations in Kamianets-Podilskyi, Ukraine (September 2025)



Visiting the Sukele' River and Precarpathian Professional College of Forestry and Tourism in the Carpathian Mountains, Ukraine (September 2025)



Signing MOUs with Lviv Polytechnic, the Geography Department at Lviv National, and the Geology Department at Lviv National in Lviv, Ukraine (September 2025)



Delivering beehives to the Tekoa Nhanderu Porã Indigenous Community and chatting with the Tupi-Guarani village leaders near the Carlos Botelho State Park in São Paulo state, Brazil (November 2025)

Partners and Major Supporters

Long-Term Partners

Blue Marble Space Institute of Science
Khairun University
Lviv Polytechnic University
Orange Wave Innovative Science, LLC

Dr. Roberto Greco (University of Campinas, Brazil)
Dr. Halikuddin Umasangaji and Dr. Lily Ishak (Khairun University, Indonesia)
Dr. Ihor Bubniak and Dr. Andriy Bubniak (Lviv Polytechnic, Ukraine)
Dr. Brice Orange (University of the Virgin Islands, USA)

Major Supporters

H.B. Fuller Company

Lev Horodyskyj
Ivan and Luba Horodyskyj
Anonymous

Join Our Journey

A heartfelt thank you to all the donors and volunteers who have contributed their time, expertise, and money to our cause. If you would like to join us on this journey, you can contact us at <https://sciencevoices.org/get-involved/>. Additionally, you can follow us at our websites and social media channels.

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